Guidelines for Creating Pre- and Post-Tests

What are pre- and post-tests?

The pre-test and post-test are designed using the learning objectives established for the module/course. Both tests consist of the same test items. However, the pre-test is given to trainees before they begin the module/course as a means of measuring how much they know about the topic. At the conclusion of the module/course, the trainees take the post-test that measures their ability to apply knowledge or perform a specific task.

To make the test results more meaningful, CSD's Training Advisory Committee recommends creating variations of pre-test items for the post-test. This practice ensures that trainees taking the post-test will be tested on their understanding of the materials rather than their ability to memorize answers from the pre-test.

Why have trainees take two tests?

- ✓ Those who take and pass the pre-test may not need to attend the training.
- ✓ Trainers can compare the results of the two tests and identify areas where trainees need additional practice or information.
- ✓ Pre-test scores that don't improve during the post-test tell the trainer that the training content and delivery methods may need to be modified.

How do I get started?

Step 1.

Look at the learning objectives and the content outline for the module/course. Identify the specific points that the trainee must know and subsequently will be tested on.

Step 2.

Choose the best test item format for the learning objective you are measuring. Test items can take many forms including short answer, multiple choice items, story problems, or hands-on simulations.

For example: If the learning objective states that the trainee will be able <u>to print</u> a letter in ACES on-line, then you need to create a simulation exercise that allows the trainee to actually print a letter.

For example: If the learning objective states that the trainee will be able to list the five types of expedited processing letters for clients then a short answer or multiple choice item would be better than a story problem or simulation.

Step 3.

Develop test administration instructions for the trainer. Provide the answers to the test items, amount of time required for the test, and any other information the trainer needs to administer and correct the test.

Step 4.

Test your test! Ask another person to review your instructions and test items.

- ✓ Are the instructions clear?
- ✓ Is there enough information in each test item to determine the answer?
- ✓ Are any test items misleading or confusing?
- ✓ How much time was needed to complete the test?

Revise your test items and trainer instructions based on the feedback you receive. VOILA! You are finished!

Following are suggestions for developing meaningful tests:

How many test items should I write?

There is no magic number of test items that you should create. However, you should write at least one test item for each learning objective, and more if the objectives were complex or require thorough knowledge of a particular topic. Also consider the length of the session. If you developed a full day session yet only created ten simple test items, its possible that you either provided too much information during the training or you haven't developed enough test items to adequately test the trainees on the information that was covered.

How much time should be allotted for a test?

Unless you are testing the trainee on how quickly they can complete a test, it is better to provide too much time than not enough. The reason for this is simple. Many adults experience test anxiety, read slowly to aid comprehension, have learning disabilities that often result in the need for additional time, or require more time to recall information from memory. Putting your test through a trial run will give you a better idea of the time needed to administer it.

What are some tips for writing test items?

General Tips

- ✓ Test items should be based on information that is significant for the trainee. Don't test on trivial details.

- ✓ Start with easier questions first to minimize test anxiety.
- ✓ Use clear and concise language when writing test items.
- ✓ Avoid using negatives and double negatives in the questions. They can make the test item difficult to understand and confuse the trainee.
- ✓ Avoid trick questions that measure the trainee's ability to guess rather than their actual knowledge.

Multiple Choice Tips

- ✓ Test items should have only one correct answer. Make sure wrong answer choices are not plausible.
- ✓ Each test item should be independent and not based on a previous test item.
- ✓ Avoid unintentional clues such as "always," "all," and "never."
- ✓ Don't make the correct choice longer than the incorrect choices. Trainees become "test-wise" and can guess the correct choice.
- ✓ Randomly place the correct response within the incorrect responses.
- ✓ Don't use "all of the above" or "none of the above" as choices.
- ✓ Create as many responses for each test item as are plausible. Create at least 2 or as many as 5.

Matching Tips

- ✓ Arrange the items in some logical order.

  For example: One column lists the <u>type</u> of reports that can be printed and the second column lists the <u>circumstances</u> when they might be printed.

- ✓ Have more items in one column than in the other. Doing so increases the difficulty of the test and decreases the chance of correct guesses.
- ✓ In the instructions, tell the trainees that some choices may be used more than once or not at all.

Fill-in-the-Blank Tips

- ✓ Place blanks at or near the end of the test item.
- ✓ Use no more than 2 blanks per test item.
- ✓ Consider converting a fill-in-the-blank item to a multiple-choice item. These provide the trainee with a defined set of choices and are easier for the trainer to correct.

  For example:
  In Greek mythology, Vulcan was the son of _____ and _____.
  a. Venus and Zeus
  b. Jupiter and Mars
  c. Mars and Juno
  d. Jupiter and Juno

Performance Scenarios (simulation) Tips

- ✓ Create performance scenarios that directly correlate to the learning objective, especially when you want a trainee to demonstrate a specific skill.
- ✓ Make the simulated situation as realistic as possible.
- ✓ Provide directions that tell the trainees what response they must provide (such as a printed report)
- ✓ If applicable, provide the parameters of the scenario (such as time limits) in the directions.

True/False Statement Tips

- ✓ When possible, avoid True/False statements. They are the least reliable for measuring learning because trainees have a 50% chance of getting the answer correct if they guess.